

PROJECT 10073 RECORD

1. DATE - TIME GROUP 27 Feb 67 28/0119Z	2. LOCATION Grand Haven, Holland, Michigan (3 witness)
3. SOURCE Civilian	10. CONCLUSION (1) UNIDENTIFIED (2) Astro (VENUS)
4. NUMBER OF OBJECTS 2	
5. LENGTH OF OBSERVATION 1 hour 11 minutes	11. BRIEF SUMMARY AND ANALYSIS SEE CASE FILE
6. TYPE OF OBSERVATION Ground-Visual (BX)	
7. COURSE Varied	
8. PHOTOS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
9. PHYSICAL EVIDENCE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

0.075 of the field width, or three degrees. As a reference, an object subtending three degrees at a distance of ten miles would have a diameter of 1800 feet. If the comparison with the moon given by the witnesses is taken instead, an object subtending $1/6$ the diameter of the moon, or $1/12$ degree, at the same distance, would have a diameter of 75 feet. Of all observers, [REDACTED] was closest (his second sighting) and his description of the appearance is somewhat more detailed than the others. He was 3.7 miles from the closest possible position of the object, obtained from intersecting his last view with [REDACTED]'s last view; his estimate of size was $1/6$ the diameter of the moon (which he gave as $1/4$ inch at arm's length, correctly), therefore, the best size estimate comes out to be 30 feet. However, these size estimates are highly unreliable: [REDACTED], for example, said at one time that the object would be as big as a baseball at the distance of a tree 500 feet away, which is at the limit of angular resolution of the human eye: a point-source would look that big, and a bright point-source would look considerably bigger.

Two of the observers ([REDACTED] and [REDACTED]) indicated that the object had a blue-green patch of light on its lower left quadrant, and a red patch on the lower right quadrant; [REDACTED] said these appeared to him to increase and decrease in brightness. [REDACTED] saw only a green patch on the lower left quadrant.

The objects seen at 9:00 PM by [REDACTED] and his rider also showed these lights, as did the object seen through binoculars at 9:30.

Summary

In this one-day investigation many witnesses known to have reported an object on the night in question were not interviewed; the interviews were confined to the three parties mentioned. Therefore all conclusions that can be drawn are tentative.

It appears certain that the initial sighting by ████████ and Heerspink involves an extremely bright light source of extended angular diameter, located three miles north of Holland and between three and four miles out into Lake Michigan; its altitude, if the elevation estimates are believed, would have been less than 1000 feet. The angles of view are 65 degrees apart, probably too wide an angle to be covered by an airplane landing light.

Since these sightings occurred at the same time that ████████ saw an object due west from inside his house, ████████ could not have been seeing the same object: it appears possible that he was looking at Venus, which was lower in the sky at the time of his sighting than he later believed it to have been. If that object was Venus, it set either below the horizon or below a low bank of clouds in the west, prior to sighting of the next object, because it disappeared from the westerly position and was not seen again.

The second object which ████████, to the northwest, appears to correlate with the object that ████████ observed to come rapidly from the south and stop abruptly over the road; these lines of sight converge ten miles from the lakeshore and north of Grand Haven. The sudden, very fast, left-to-right movement seen by ████████, followed by a stop of extreme

abruptness, may well be taken as what [redacted] reported as a sudden appearance of the object to his right. The lines of sight are 25 degrees apart, probably within the range over which landing lights could appear bright to both observers.

If that is true, then [redacted]'s later views could not have involved Venus, for [redacted]'s testimony tends to show that Venus was no longer visible (or was temporarily obscured) prior to the sudden appearance of the object he saw in the northwest. On the other hand, it is possible that all of [redacted] views except the first two (one correlating with [redacted], one with [redacted]) were in fact views of Venus, since he could no longer see either to the northwest or the southwest.

It should be mentioned that [redacted] says he did see Venus at the same time as he saw the first object: Venus, he says, was higher in the sky and slightly south of where he saw the first object. The others also are very sure that Venus does not look like what they saw. However, the subject of Venus had been brought up prior to this investigation, and so it would be well to determine the exact setting time of Venus.

According to ephemeris-based calculations, Venus should have set about one degree north of west at 8:45 PM, EST. At 8:20, it would have been 4-1/2 degrees above the horizon, and about three degrees south of west - very nearly where [redacted] first saw an object. Unless there were low clouds on the western horizon, Venus should have been visible throughout the sightings to an observer capable of seeing within 1.5 degrees of the horizon.

A timetable of events, with considerable uncertainty, would go as follows:

8:19 [redacted] called by dispatcher: [redacted] hears call and sees object to SW.

8:20 [redacted] overhears call: sees object to west. [redacted] starts north, [redacted] watches object SW.

8:22 [redacted] sees object to NW. [redacted] goes outside to look at object in west, returns indoors and calls office.

8:25 [redacted] turns down Riley Street; Heerspink drives up Cedar Street. [redacted] gets coat, not watching.

8:27 [redacted] goes outside again: first object gone, second suddenly appears. [redacted] sees object suddenly move to position over road. Wassink still driving toward object in west.

8:35 [redacted] loses object behind dunes: [redacted] arrives at final position, sees object in west; [redacted] still watching object in NW.

8:36 [redacted] loses object - faded or moved down behind trees.

8:37 [redacted] sees object disappear suddenly with instantaneous motion to south.

8:40 [redacted] arrives at lakeshore: nothing visible.

9:00 [redacted] sees objects to south.

9:30 [redacted] and [redacted] report UFO in middle of county: [redacted] sees in binoculars.

The principal objections to some possible explanations (a) the brightness, (b) the shape and size, and (c) the rapid motions of the objects. These can be dealt with to some degree of confidence.

Brightness. UFO reports were received at Ottawa County Sheriff's Department by the investigator, which involved an extremely bright object positively identified as Venus. This took place the evening of the investigation, March 3. [redacted] was surprised to see Venus low in the sky at 8:20 PM that night - he said his object was much brighter, but Venus was seen through trees and appeared 2 - 3 magnitudes dimmer than normal.

[redacted]

A 250 candlepower landing light focussed to a 10-degree beam will appear to be of magnitude -6 at a distance of ten miles - over ten times as bright as Venus. However, in one case the beam width would have had to be 65 degrees, reducing the brightness to magnitude -2, dimmer than Venus.

Shape and Size. Any bright light against a black background appears round and of considerable size. The witnesses gave greatly varying estimates of size, from 1/12 degree to three degrees, for the same object. All said, however, that it was much smaller than the moon (1/2 degree). [REDACTED] gave the size as that of a baseball at 500 feet, which is about one milli-radian or three minutes of arc - actually a bright point source of light would look bigger than that, owing to spreading of light in the eye.

The red and green lights seen right and left of the main white light were observed intermittently - these, of course, would fit the red and green running lights of an airplane.

Motions. The most striking motions were those reported by [REDACTED] (90 degrees to left in the "snap of the fingers") and [REDACTED] (shot out over the road and stopped instantaneously). [REDACTED] could not describe the motion - it was "too fast to follow". He said at one point that it "just disappeared, but I could tell which way it went" - meaning that all motion information came at the instant of disappearance. He did not see it in motion. It left no streak of light. Under the circumstances, it is entirely reasonable to suppose that there was an involuntary impression of motion, but no actual motion. The light simply went out.

If the sudden appearance seen by [REDACTED] coincided with [REDACTED] observation of fast motion from the left, there is considerable support

for the idea that the light simply turned on suddenly. In any case, the fact that Heerspink had been watching an object to his left and then suddenly saw an object straight ahead would be enough to explain the impression of swift motion from left to right. This is a well-known phenomenon of perception.

The jumps from left to right and up-and-down all subtended eight degrees or less. Involuntary motions of the eye could account for these jumps entirely. It is significant that Grysen did not see the westerly object move except when he was outdoors and had lost the window as a stabilizing reference. [REDACTED] was sure that when he was viewing an object with well-braced binoculars it jumped vertically out of the field of view - but that is exactly how it would move with the binoculars resting on the curved surface of a patrol car roof. Lacking observing experience with magnifying optics, a witness could well fail to realize that what looks like a large motion could be caused by a motion of the binoculars too small to feel.

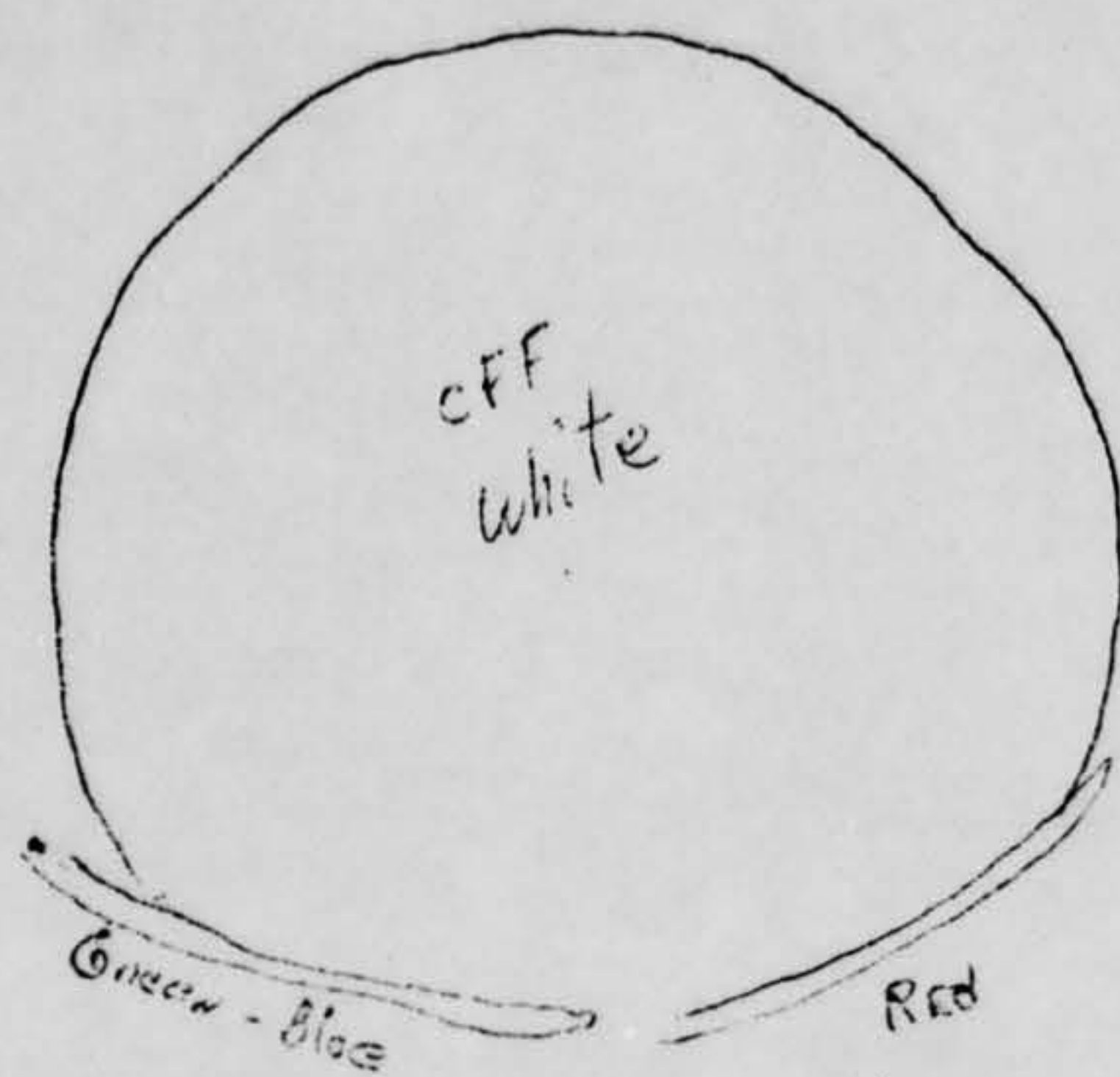
In short, there is nothing about the observed motions that cannot be accounted for by well-known properties of perception.

Conclusions

The appearance of those objects which are not identifiable with Venus is similar to that expected from aircraft landing lights. However, since no specific flights could be identified, this conclusion does not prove that the cause was in fact airplane landing lights. The existence of the similarity, however, makes it impossible to conclude that a definitely unconventional object was present. The objects remain unidentified, meaning neither known to be unconventional or known to be conventional.

Position of Venus from Grand Haven, Michigan, March 1, 1967 (UT)

Longitude of Grand Haven (Lakeshore)	5h 44m 56s
Sidereal Time at 0120UT, March 1 (8:20 PM EST, Feb. 28)	11h 52m 13s
Right Ascension of meridian, Grand Haven	6h 07m 17s
Right Ascension of W. horizon, Grand Haven	0h 07m 17s
Right Ascension, Venus, 0120 UT, March 1	0h 24m 36s
Time, Venus to reach geometric horizon uncorrected for declination	17m 19s
Declination of Venus = $+1^{\circ} 40'$	
Correction due to declination	+6m 12s
Time, Venus to reach geometric horizon	23m 31s
Time of Venus-set, geometric horizon = 8:43:31 PM EST, February 28, 1967	
Elevation of Venus, 8:20 PM EST	= 4.27° above geometric horizon
Elevation of Venus, 8:36 PM EST	= 1.34° above geometric horizon
Azimuth of Venus, 8:20 PM EST	= 268.3°
Azimuth of Venus, 8:36 PM EST	= 271°

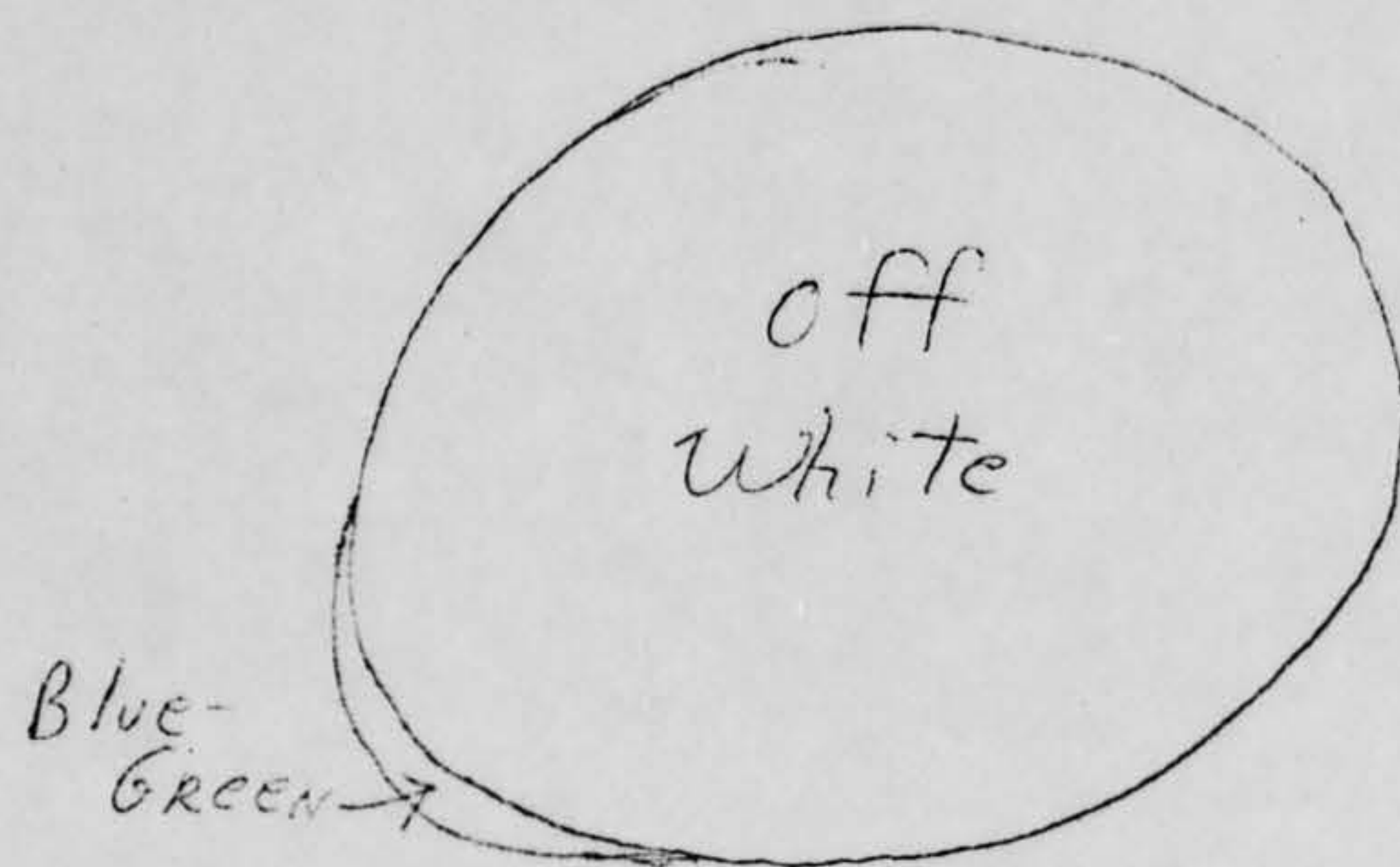


12 - 15 ft gives
right size.

$\frac{1}{6}$ moon



$$\frac{2.5 \text{ in}}{180 \text{ in}} = \frac{1}{72} = 1.25 \text{ degrees.}$$



Sightings at Grand Haven and Holland, Michigan
February 27, 1967

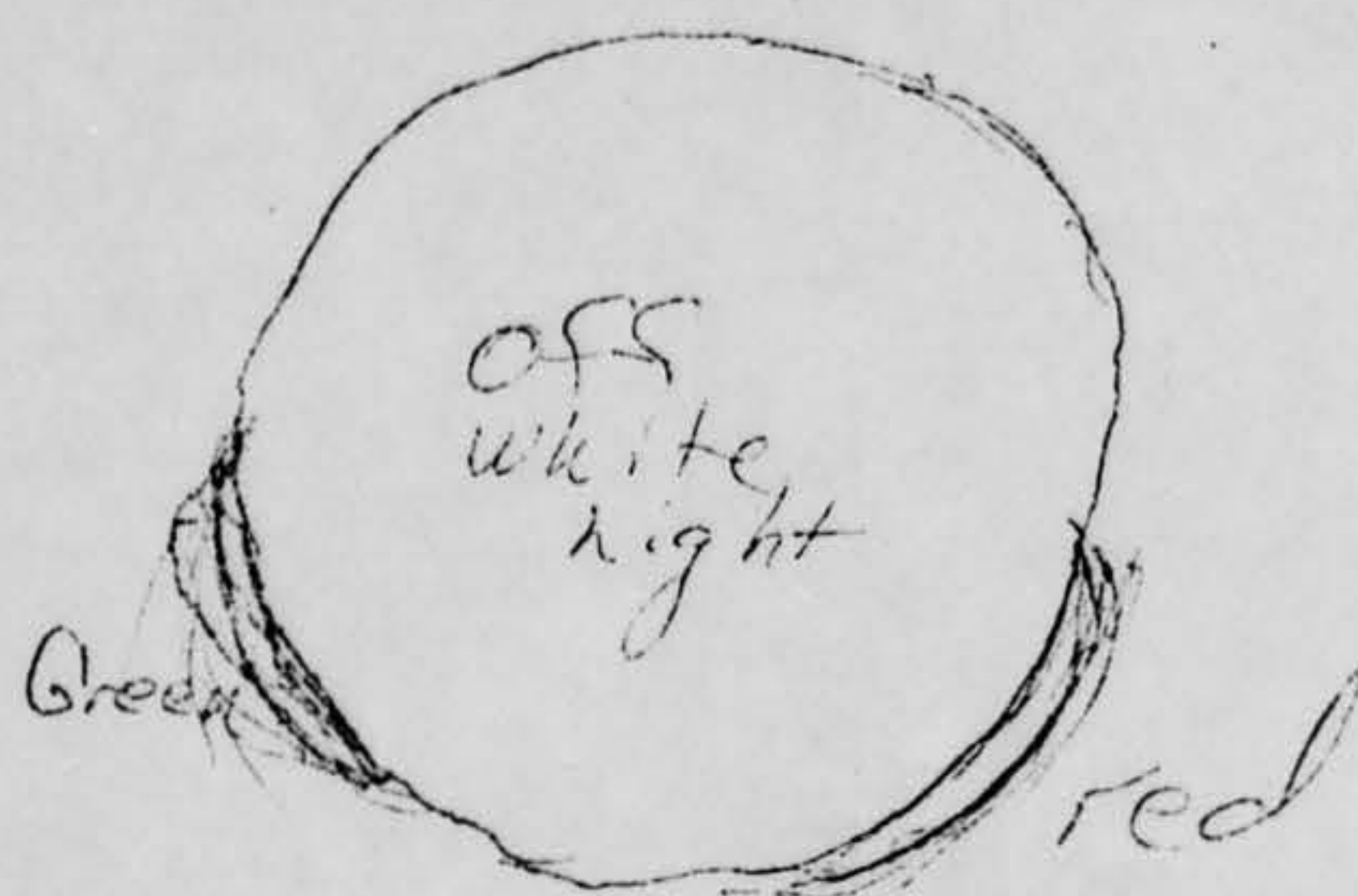
William T. Powers

In response to news reports and telephoned reports to the Dearborn Observatory, an investigation was conducted into reports of an object sighted in Ottawa County by [REDACTED] and [REDACTED] and [REDACTED]. There were reports of other sightings as well, which were not directly investigated.

A meeting was set up for March 3 in the Ottawa County Sheriff's Department offices, with the above-mentioned officers present. After the three men had given their stories, visits were made to each point from which a sighting was made, and later photographs were taken from identifiable positions for the purpose of obtaining angle measurements. Personnel at Grand Haven Airport and FAA controllers at Muskegon County Airport (12 miles north of Grand Haven) were interviewed to establish possible aircraft operations on the night in question. The results obtained suggest that an object was sighted which was not the planet Venus and not clearly aircraft with its landing lights on, but enough ambiguity remains that it is impossible to conclude that what was seen was unconventional.

The Reports

[REDACTED] and his wife were in a new beachfront cottage, working on remodeling it, when a call was heard over a monitor radio in the cottage: the dispatcher at Ottawa County Headquarters was asking [REDACTED], then in a patrol car in Holland, whether he could see an object which an



$\frac{1}{6}$ moon.

unidentified civilian had reported by telephone. [REDACTED] said no, but that he was headed north on Highway 31 and would soon be clear of the city. At that time, [REDACTED], in his patrol car about 20 miles north of Wassink and about 14 miles from the lakefront overheard the call, and radioed that he had a bright object in view to the southwest. Angle measurements made with reference to landmarks and the road ([REDACTED] Street near [REDACTED] Avenue, Grand Haven) showed that [REDACTED]'s direction of view was about 30 degrees south of west, or bearing 210 degrees. This sighting took place within a few seconds of the radio message, and so was just after 8:19 p.m. EST.

Two to three minutes later, [REDACTED], now located at the north edge of Holland and about 20 miles [REDACTED], reported sighting a bright object to the northwest; by landmarks, the bearing to the object was established as 295 degrees. [REDACTED] proceeded north. About 1/2 mile further, where Highway 31 crosses Lakewood blvd., a comparison of brightness was made by [REDACTED], with a cluster of lights on a pole over a railroad yard: the object was reported as being much brighter. The lights were viewed by the investigator at night, and would be of stellar magnitude -8 to -10; far brighter than Venus. At this point the angle of view was about 280 degrees.

[REDACTED] proceeded to Riley Avenue, 1-1/2 miles farther north, at which point the object appeared to be nearly over Riley Avenue, which is an east-west street. He turned down Riley, west, and proceeded four miles until the object was lost to sight over some dunes; he spent the next five

to seven minutes finding a road over the dunes, and by the time he had a clear view of the lakefront, the object was no longer visible.

On the basis of [REDACTED]'s testimony alone, the object sighted would have been about over the lakefront, or perhaps offshore a mile or two. A call from an unidentified woman living just off Riley puts the object over Riley Avenue, two miles from the shore, as she reported it over her car at about 8:20. This is not inconsistent with [REDACTED]'s report.

As near as can be determined, [REDACTED]'s initial view of the object coincided with [REDACTED]'s first observation, or followed it very shortly: [REDACTED] watched for five minutes, which is enough time for [REDACTED] to have reached his first point of observation at Chicago Drive and Highway 31. These two lines of sight cross about 4 miles offshore, and nine miles south of Sheriff Grysen's position. [REDACTED]'s line of sight from his position at Highway 31 and Riley also passes through this area.

At about this time, [REDACTED]'s wife called him to the west window of the cottage: he had not gone to look after hearing the calls, figuring that this was just another UFO report, of which he has heard many. He then went to the window, and immediately saw an object in the west, no more than four degrees above the horizon (his upward view was limited by a porch roof outside the window to that amount). The object [REDACTED] was observing at this point could not have been the same as the one which [REDACTED] and [REDACTED] were looking at. [REDACTED] went outside to get a better look, and saw the object jump right and left by about eight degrees.

[REDACTED] watched the object for a few minutes, and then went back in

his cottage to call the office; while talking to the office he could still see his object, so it was quite low over the horizon. The object did not move, as seen from inside the cottage. [REDACTED] then went into the bedroom to get his jacket, and when he returned the object was gone. At all times the direction to this object was slightly south of west or due west.

At about the time [REDACTED] had reached [REDACTED] and turned west, [REDACTED] moved west on [REDACTED] (also known as Green Street). He and his reserve rider (not interviewed) kept the object in sight for a time, but lost it behind trees.

[REDACTED] actually runs about thirty degrees north of west from 104th Avenue to about 110th Avenue, and then turns due west. According to Heerspink's story, and also in accord with information received at the site, Heerspink had travelled about 1/4 mile up the first, NNW, section of Cedar, and had lost sight of the object for a moment, when it came "streaking in from the left and stopped over the road." The road does not change direction for about 3/4 mile, so this motion could not have been due to a turn in the road. During the investigation, when the car was stopped at the point where the object made this move, the investigator noted that the address on the nearest mailbox indicated a location at about 107th Avenue, which is definitely on a straight stretch of road. In other words, the object appeared at a bearing of 300 degrees; Venus could not possibly have been over the road - in fact, it was probably not visible at all from that position, because of the trees. The time at which the object streaked to the right would have been at about 8:25 to 8:27. The witness was certain he saw the object in motion: it stopped abruptly.

Grysen by about this time had put on his jacket and had gone outside. He had been outside for perhaps thirty seconds, when he caught sight of what he took to be the same object, but this time at a bearing of 315 degrees - northwest - and an altitude of eight to ten degrees, considerably higher than before. His impression was that the object appeared suddenly.

During this time, [REDACTED] was watching his object to the west, slightly north of west: his line of sight definitely diverges from that of both [REDACTED] and [REDACTED]: therefore he was observing a different object, but still possibly not Venus unless he lost sight of the original object and was looking at Venus as he went east on Riley.

The lines of sight of [REDACTED] and [REDACTED] for the second observations intersect north of Grand Haven and out over Lake Michigan at least ten miles: the baseline is about six miles. The uncertainty is probably four or five miles in distance of intersection, mostly due to [REDACTED] lack of clearcut landmarks: [REDACTED]'s line has to be within a degree or two of correct since the road defined an accurate line.

[REDACTED] then proceeded on Cedar Street to 118th Avenue, losing sight of the object for a considerable stretch: the road made a 30-degree bend to the left, heading due west and then slightly south of west. At 118th Avenue, [REDACTED] got out of the car and sighted from a stop sign to a telephone pole to establish a line of sight to the object then visible perhaps five degrees to the left of the road (bearing roughly 260 degrees) and no more than three to four degrees above the horizon (distant treetop level). At this point he was looking about forty degrees to the left of

where he had seen the object come to a sudden stop over the road, and so now may have been looking at Venus. He then proceeded to 144th Avenue (there are eight avenues to the mile), where he parked and watched the object, just south of west, as it dimmed and brightened several times, and then either went down or turned off. The time then was, according to [REDACTED], 8:36. Venus would then have been about 1.5 degrees above the apparent horizon and would have been behind the distant tree line.

[REDACTED] reported that he watched the object to the northwest move up and down several times, and then "just like that" shoot left through a 90-degree angle and disappear behind trees in the southwest. He went back in the house after it disappeared, which was, according to [REDACTED], twelve to fifteen minutes after he first noticed it. That would place the time of the last motion at about 8:35. However, this time estimate may be long.

[REDACTED]'s last line of sight was from a position about 5.5 miles ENE of [REDACTED]'s location: he was watching an object brighten and dim just south of west. At this same time, [REDACTED] was observing an object to the northwest, and remarked at one point that the object did dim and come back to its original brightness several times before it shot off to the south. Therefore it is possible that (a) Venus had set below the tree line by the time Heerspink reached his final position, at about 8:30, and (b) he was then watching the original object, which had moved closer to [REDACTED] along [REDACTED]'s line of sight. If that is the case, the object would have been two miles offshore and 2.7 miles north of [REDACTED], because that is where [REDACTED]'s and [REDACTED]'s last lines of sight cross. On the other hand,

it is possible that ██████████ was still watching Venus: his view to the northwest was not entirely open and ██████████'s object may have been obscured by trees. This is supported to some extent by the fact that Heerspink did not see the sudden departure to the south: his object went down behind trees, still in the west.

██████████ then headed down toward Buchanan Street, in the direction where the first object he had seen appeared to be. On the way a motorist was seen going through a stop sign, so ██████████ pulled the motorist over and gave him a ticket: then ██████████ proceeded south on 144th street, the time being now close to 9:00 PM. As he came south over a hill at Rich Street, 1/2 mile north of M-45 (E-W), he spotted two objects that appeared similar to the previous one in shape and color, but dimmer and farther away, travelling parallel courses to the southeast. These objects crossed the road, and just to the left of the road, apparently behind the glare of the lights of Holland some fifteen miles to the south, both objects stopped. The leftmost one then went very fast straight down behind trees, and was not seen again. The rightmost object then jumped abruptly to a position about five degrees to the right, and then back to the left in the same manner, several times, finally remaining stationary. The trees near the line of sight established a direction reference, so the motion may have been actual. ██████████ finally quit watching the object, and went on toward Buchanan Street, where the men met the Sheriff outside his cottage. All then went to headquarters.

At about 9:30, two calls were received, from deputies Blair and Posma. Blair was twelve miles ESE of Grand Haven, and Posma was twelve

miles SW of Blair, in Holland. Each saw a bright object on a line toward the other observer, so the object was between them. Neither of these men wished to be interviewed. After these reports, [redacted] and [redacted] went out to "Five-Mile Hill" (on the lakefront in Grand Haven) and watched this object with binoculars. It had the same appearance as the original object: a round white light flanked by red and green patches. They were looking then to the southeast. While they were watching, an airplane went across the field of view below the object. There was no resemblance.

All of the witnesses went out to look at Venus several nights later, after an astronomer in Grand Rapids made a statement to the press that they had been watching Venus. They all agreed that Venus was smaller in size and not nearly as bright. The light was a "blinding type of light". They likewise agreed that if the object had resembled Venus, they never would have reported it: the appearance was much more striking.

All had also seen airplane landing lights; in fact, Wassink had investigated a sighting about a year before and had found the cause to be airplane landing lights. He said this present object was much brighter, and was not similar at all.

All witnesses agreed that the light had physical size: estimates were $1/6$, $1/6$, and $1/4$ the size of the moon. Indicated sizes, between thumb and forefinger, however, were around $3/4$ to one inch, indicating a size of about two degrees. [redacted] remarked that the 9:30 object seen in 7 x 50 binoculars had about the same apparent size as the first objects seen with the naked eye: in the binoculars was a reticle, and by means of this it was established that the apparent size in binoculars was about